



RADIATION ADVISORY COMMITTEE

BARBARA SMITH,
CHAIR

David Howe, Radiation Protection Services
Program Director

October 16, 2024





- Record phone-in number and passcode (in case you lose connectivity)
- Phone-in number and conference ID# provided in Teams invitation mail
- If phoning into meeting, use PowerPoint slides to follow meeting
- To unmute self, press *6



- Video (of yourself) is optional
- Please mute microphone unless speaking
- Use the “raise hand” feature if you have a question



- When speaking, begin by stating your name
- RPS staff will use screen share to share PowerPoint information and handouts
- The meeting will be recorded for purposes of accuracy in the minutes

TELECONFERENCING PROCEDURES

RADIATION ADVISORY COMMITTEE MEETING AGENDA

October 16, 2024 – Hybrid Virtual

Meeting: 800 NE Oregon St., Room 612, Portland, Oregon

Phone-In Number 1-971-277-2343 Code: 916 620 479#

(* = Action Items)

10:00 a.m. Registration/Public Session

- Call Meeting to Order – Barb Smith, Chair
- Introduction of Guests
- *Approval of Minutes – Barb Smith
- *Nomination of 2 RAC Members for 2025-2028 Term
 - Mechele Livran & Dr. Sousa Melo
- Election of RAC Chairperson and Vice Chairperson

10:30 a.m. RPS Program Updates – David Howe, Program Director

- RPS Budget Forecast Update – Todd Carpenter, Licensing Manager
- Electronic / Tanning Products Update – Brent Herring, Lead Worker
- Radioactive Materials Licensing / Operations– Hillary Haskins, Operations Manager
- Emergency Response / Incidents – Hillary Haskins
- RPS Training – Hillary Haskins
 - Organization of Agreement States (OAS) Annual Meeting in Santa Cruz, CA – David Howe
 - NRC Root Cause/Incident Investigation Workshop – Tom Mynes, Inspector
 - FEMA ICS 300/400, Salem, OR – Rich Patterson, Inspector
 - FEMA Radiological Emergency Response Operations (RERO), Anniston, AL – Tom Pfahler, Inspector
 - NRC Fundamentals Health Physics Lab Activities – Sarah Brodesser, Inspector
 - NRC Environmental Monitoring & Air Sampling for Radioactivity Lab, Oak Ridge, TN – Brent Herring
- RPS Database Update – Hillary Haskins
- New RPS-Portland Bureau of Emergency Management Interagency Agreement Finalized for All Hazards Mobile Lab (AHML) & Auxiliary Trailer – Todd Carpenter

BREAK

11:15 a.m. Exemptions/Rules/Statutes – Brent Herring

- Year-To-Date Number of Exemptions
- Southeast X-ray – asking to approve an individual with no college education (experience only) to be approved for shielding studies for x-ray.

- Proposed x-ray rule changes – Todd Carpenter & Brent Herring
- Emerging Technology – Brent Herring
 - Biology Guided Radiotherapy (BGRT) consult with OBMI
- Physicians taking radiographs – training issue – Brent Herring
- New DAS Rulemaking requirement – increased interested party representation – Todd Carpenter
- 2024-03 RPS Informational Bulletin-Rectangular vs. Circular Collimation – Brent Herring

11:45 a.m. Lunch

12:15 p.m. Emergency Preparedness/Response – Hillary Haskins

- Naval Reactor Compartment Disposal Shipment, Bremerton, WA – Tom P. & Sarah
- Personal Dosimetry acquisition (RadEye) – 2024-2025 Health Security, Preparedness and Response (HSPR) grant
- 2025-2026 HSPR Grant – Emergency Preparedness/Response – Lab Equipment/Training
- Dry Creek Landfill Event Mitigation – RPS/Oregon Department of Energy consults
- Deceased Individual Remains Handling Post Lutecium Therapy
- Status of 2024 State Radiological Emergency Response Plan – Todd Carpenter

12:45 p.m. New Business

- Public Health Director – Dr. Naomi Adeline-Biggs
- Out of State Travel Restrictions

1:30 p.m. PUBLIC COMMENTS:

2:00 p.m. Announcements


- Next Meeting Scheduled for February 12, 2025
- Adjourn





INTRODUCTION OF GUESTS

Radiation Advisory Committee Meeting



**APPROVAL OF MINUTES FROM
JUNE 12, 2024**

Radiation Advisory Committee Meeting



NOMINATION OF RAC MEMBERS FOR 2025-2028 TERM

RADIATION ADVISORY COMMITTEE MEMBERSHIP

01/01/2024

Name	*First Term	Second Term	Third Term	Comments
Zambelli, Alicia	01/01/23-12/31/26			
Berry, Bob	01/01/20-12/31/23	01/01/24-12/31/27		Vice Chair- 1 st term 01/01/23- 12/31/24
Henrikson, Mandy	01/01/17-12/31/20	01/01/21-12/31/24		
Hamby, David	05/07/20-12/31/23 Replaced M. Krahenbuhl	01/01/24-12/31/27		
Smith, Barbara	07/25/14-12/31/17 Replaced R. Farmer	01/01/18-12/31/21	01/01/22-12/31/25	Chairperson-2 nd term 01/01/23-12/31/24
Wood, Dennis	01/01/22-12/31/25			
Frey, Garrett	01/01/23-12/31/26			
Sousa Melo, Saulo	04/01/23-12/31/24 Replaced J. Frankel			

*May be partial term due to replacing a member. Bylaws state a member can serve two full terms after the bylaws were adopted.



2024 RAC MEMBER & OFFICER NOMINATIONS

- Mechele Livran
 - Director of Retail Operations – Palm Beach Tan
 - 15 years experience in the tanning industry
 - Knowledge of implementing tanning OARs
- Dr. Saulo Sousa Melo nominee for reappointment to second term
- Nomination of Chairperson
- Nomination of Vice Chairperson





RPS PROGRAM UPDATES



RPS BUDGET

Todd Carpenter, Licensing
Manager RPS



RPS EXPENSE SUMMARY AS OF AUGUST 31, 2024

As of 8/31/24						
Grant No	Grant Title	Beginning Balance	Revenue AY25/Budget	Accrued Revenue	Expenditure	Remaining Balance
480382-25	RPS Grain Analysis Lab Fee	(39.29)	12,474.00	-	5,529.16	6,905.55
480425-25	RPS X-Ray Registration Fee	2,208.79	3,189,551.63		2,752,114.34	439,646.08
480467-25	RPS Radioactive Materials License (RML)	1,370.20	1,274,865.70		1,389,746.99	(113,511.09)
480496-25	RPS Tanning Device Registration	187,728.95	186,868.79	1,620.00	200,769.80	173,827.94
480206-23	RPS DEQ School Disposal		1,921.95		2,827.26	(905.31)
480214-23	RPS DOE First Responder Training	(17,826.46)	25,000.18		7,173.72	-
480795-26	RPS ODOE 1st RESP/REC TRNG		37,074.87	-		37,074.87
480473-23	RPS Metro Rad Mat Disposal	70,353.17	(32,473.77)	-	37,900.49	(21.09)
480473-25	RPS Metro Rad Mat Disposal	-	50,873.84	-	(1,578.50)	52,452.34
480408-25	RPS ODOE Rad. Training (Internal)	35.42			2,331.23	
480408-28	RPS ODOE Rad. Training (Internal)	-	28,000.00	-	25,545.13	2,454.87
280568-22	RPS Mammography Fac Inspection PH22		533,322.48	-	533,322.48	-
280568-23	RPS Mammography Fac Inspection PH23	(82,086.74)	277,992.00	-	195,905.54	(0.28)
280568-24	RPS Mammography Fac Inspection PH24	82,086.74	294,680.00		48,887.52	327,879.22
280568-25	RPS Mammography Fac Inspection PH25				-	
		243,795	4,774,157	1,620	4,420,028	597,924
		-	1,105,994	-	778,116	327,879
	Total All Funds	243,795	5,880,151	1,620	5,198,144	925,803

ELECTRONIC / TANNING INSPECTION UPDATE

Brent
Herring,
Lead
Worker, RPS

Inspections since last RAC meeting:

- 255 X-ray Inspections (medical, dental, vet, therapy, MQSA, and industrial)
 - 1003 Machines
 - 1014 Tubes
- 17 Tanning Inspections

Violation Summary:

- **X-ray**
 - Machine registration
 - Operating training
- **Tanning**
 - Timer not checked annually
 - Emergency shut-off not tested annually
 - Trained operator not present
 - Exposure schedules not available at timer controls
 - Skin type not determined/recorded



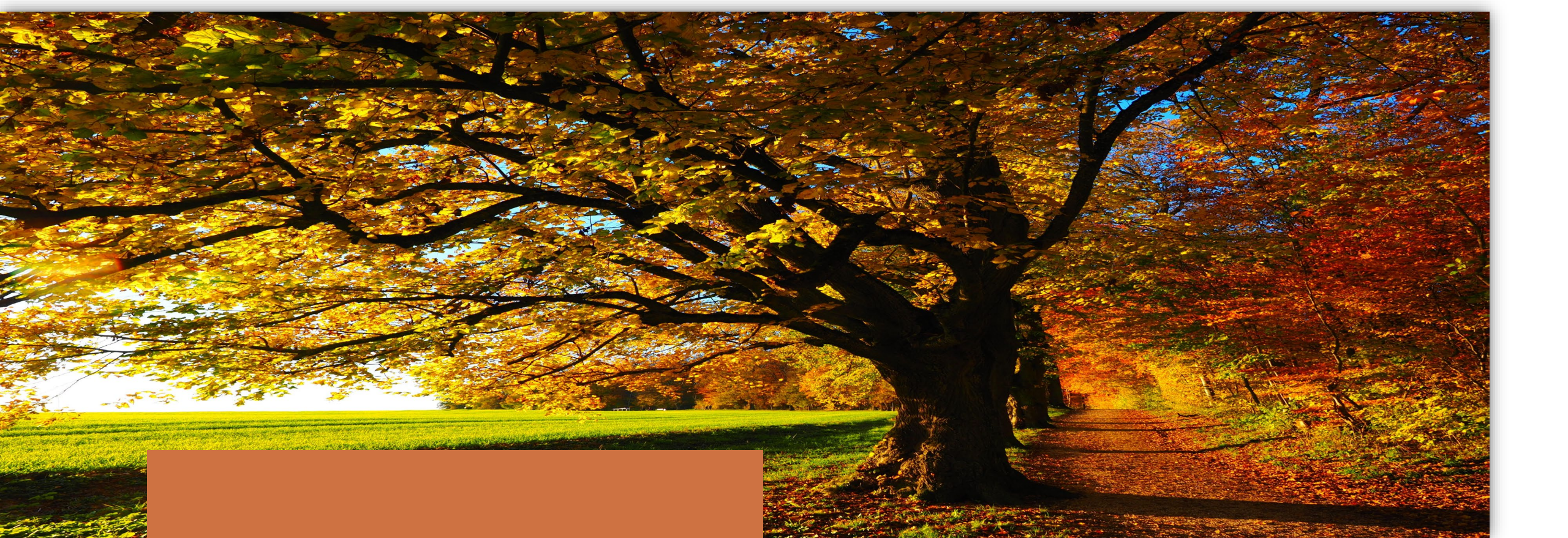
RML PROGRAM UPDATE

- RML activity June 01 – Sept 30, 2024

Description	Count
Inspections	29
Closed Licensing Actions	54
Closed Incidents	11
Open Incidents	8

Hillary Haskins,
Operations Manager, RPS





RPS TRAINING UPDATE

Hillary Haskins,
Operations Manager, RPS



CONFERENCES, TRAININGS & EVENTS

Aug 12-16 th	NRC Root Cause/Incident Investigation Workshop (G-205) – Tom Mynes
Aug 18-22 nd	OAS Conference, Santa Cruz, CA – David Howe
Aug 20-22 nd	FEMA ICS 300, Salem, OR – Rich Patterson
Aug 25-31 st	FEMA Radiological Emergency Response Operations (RERO), Anniston, AL – Tom Pfahler
Aug 26-30 th	NRC Lab Fundamentals Health Physics Lab Activities (H-122) – Sarah Brodesser

Sept 24-25 th	FEMA ICS 400 in Salem – Rich Patterson
Sept 24-27 th	NRC Environmental Monitoring & Air Sampling for Radioactivity Lab (H-130L), Oak Ridge, TN – Brent Herring
Sept 30 th - Oct 1 st	Naval Reactor Compartment Disposal Shipment, Bremerton, WA – Tom Pfahler & Sarah Brodesser



ENVIRONMENTAL MONITORING & LAB SAMPLING LABS (H-130)

- A week-long lab course held in Oak Ridge, TN
- Course involved the following:
 - Air Sampling and analysis
 - Calibration
 - Air sampling in workplace
 - Stack sampling
 - Water Sampling
 - Grab samples
 - Soil Sampling
 - Sediment Sampling
 - Core samples taken in slough
 - Field Measurements
 - Using meters to detect levels of contamination at known site

RPS DATABASE UPDATE

☀ Inspection Results



Warning: Any save to this inspection will now result in a potential change in results.

Medical RML Medical Inspections

Personnel & Facility History

RM 1: Observation of Licensed Activities The inspector should observe a representative sample of the range of licensed activities that may be ongoing during the inspection, with emphasis on those of higher risk. In a typical nuclear medicine facility, PET studies and therapy treatments pose the greatest risk. The inspector should observe a range of activities, from ordering licensed materials through the disposal or transfer of licensed materials.

RM 2: Safety and Security of Licensed Material The inspector should observe a representative sample of facilities to determine if licensed materials are appropriately attended when in use or secured when in storage. The inspector should verify that the licensee has adequate inventory controls in place to ensure that all licensed materials are accounted for.

RM 4: Assessment of Dose to Workers and the Public The inspector should review the results of dose assessment for all activities under the license for which monitoring of radiation workers is required. Particular attention should be paid to verifying assessments of internal dose, if applicable, to ensure that appropriate procedures are implemented and results are accurate. The inspector should also review results of assessments of public dose due to use of licensed materials.

RM 5: Surveys for Contamination and Exposure Control The inspector should observe radiation workers perform surveys for contamination and exposure to ensure that: (1) the licensee has the necessary variety and availability of instrumentation needed to perform surveys of the range of radioactive materials authorized on the license; and (2) the licensee staff performs adequate surveys.

RM 6: Management Oversight The Radiation Safety Officer (RSO) is commonly an Authorized User, for which the RSO responsibilities are an ancillary task, or a consultant, neither of whom may be present at the facility on a daily basis. The inspector should evaluate management's awareness of, and involvement with, the radiation protection program to determine if assessments of past performance, reportable medical events, present conditions and future needs are evaluated, and appropriate action taken when needed.

INTERAGENCY AGREEMENT

**Portland Bureau of Emergency Management Interagency Agreement
All Hazards Mobile Lab and Trailer
Shared Resource**

PBEM EOC Facility at 9911 SE Bush St., Portland, Oregon





BREAK





EXEMPTIONS / RULES / STATUTES

BRENT HERRING – Lead X-ray Inspector

YEAR-TO-DATE NUMBER OF EXEMPTIONS

In 2024, so far, 22 exemption requests have been completed.

- 7 Fluoroscopy Operators in veterinary facilities
- 4 Veterinary Facilities with CT machines
 - 12 CT Operators
- Use portable x-ray device like a fixed radiograph unit during construction of room while equipment is being upgraded
- There are an additional 20 that are pending document review.

Previous years exemptions

2023 – 17 exemptions

2022 – 10 exemptions

2021 – 2 exemptions

2020 – 5 exemptions

2019 – 10 exemptions

2018 – 11 exemptions

2017 – 5 exemptions

EXEMPTION REQUEST - SOUTHEAST X-RAY

- Exemption request to allow individual with no college education (experience and RSO class only) to be approved for shielding studies and x-ray machine testing.
- Currently approved in North Carolina, Utah, Minnesota, New Mexico, and Arkansas
 - North Carolina license specifically states approved in shielding studies and x-ray testing
- Has RSO Certificate of Completion
 - 40 hrs
 - Completed on 12/2021

333-106-0110 and 333-100-0005

The Authority may require the applicant to utilize the services of a qualified expert to determine the shielding requirements prior to the plan review and approval.

For Qualified Expert must meet one of the following:

- Board Certified in appropriate field
- Master's Degree or higher in physics, biophysics, rad physics, health/medical physics
 - 1 year documented, full time training in appropriate field
 - 1 year documented, full time work experience under qualified expert in appropriate field
- Receive approval from Authority (if they do not meet above criteria)
 - Past precedent: Bachelors in Physics with 100+ hours of survey training beneath qualified expert is sufficient (x-ray and fluoro ONLY)

PROPOSED RULE CHANGES

TODD CARPENTER & BRENT HERRING



[OAR 333-119-0100 \(4\) Tanning Service Vendor](#)

Repeal “All persons hired for servicing and repair of tanning devices shall be State of Oregon licensed electricians”.

[333-106-0005 Definitions](#)

(108) “Supervision” means the supervising individual routinely reviews and monitors, **or directs**, the work being performed.

[333-101-0025 Out-of-State Radiation Machines](#)

Repeal the statement (4) Notwithstanding sections (1), (2) and (3) of this rule, registered general licenses for out-of-state radioactive material under specific license may be brought into the state for use at temporary jobsites only under the provisions of OAR 333-102-0340.

[333-106-0205 Fluoroscopic X-ray Systems Requirements: Activation of the Fluoroscopic Tube](#)

Add to rule “*Non-radiologist practitioners, who are physically present in the room during fluoroscopy use, are required to have Authority approved fluoroscopy training if the non-radiologist practitioner is operating a fluoroscopy machine or supervising a fluoroscopy operator (Radiologic Technologist)*” ;
and

Amend (4)(c) Rad tech....may operate fluoroscopic equipment under the personal or direct supervision of a radiologist or **personal supervision** of a non-radiologist practitioner who has....

[333-123-0045 \(2\) \(b\) \(F\). Quality Assurance Program-Radiation Therapy](#)

Rule amendment request by Tom Mullen to update rule text “At a minimum, prior to the administration of the first radiation treatment, a Port film or Portal image must be taken to check that the radiation field is properly aligned to the intended treatment area. The Port film or Portal image must be viewed and evaluated and the beam alignment approved by the Radiation Therapy Physician before radiation therapy commences. Thereafter, a weekly Port film or

- *Portal image must be reviewed and signed by a Radiation Therapy Physician”.*

PROPOSED RULE CHANGES

TODD CARPENTER & BRENT HERRING



333-106-0325(2) Use of Rectangular Collimation

Add the statement to rule “All rectangular collimators must be installed by an approved Oregon Vendor. A Positioning Indicating Device (PID) must be used for all dental intraoral exposures using rectangular collimation ”.

333-119-0090(2)(c) Protection of Consumers

Change rule reference from 333-119-0100(14) to 333-119-0100(12).

333-106-0325(2)(a) Intraoral Dental Radiographic Systems

Add the term to the statement “at the minimum SSD, shall be containable in a circle *or rectangular cone*”.

Review of Division 123 Using Therapeutic Radiation Machines

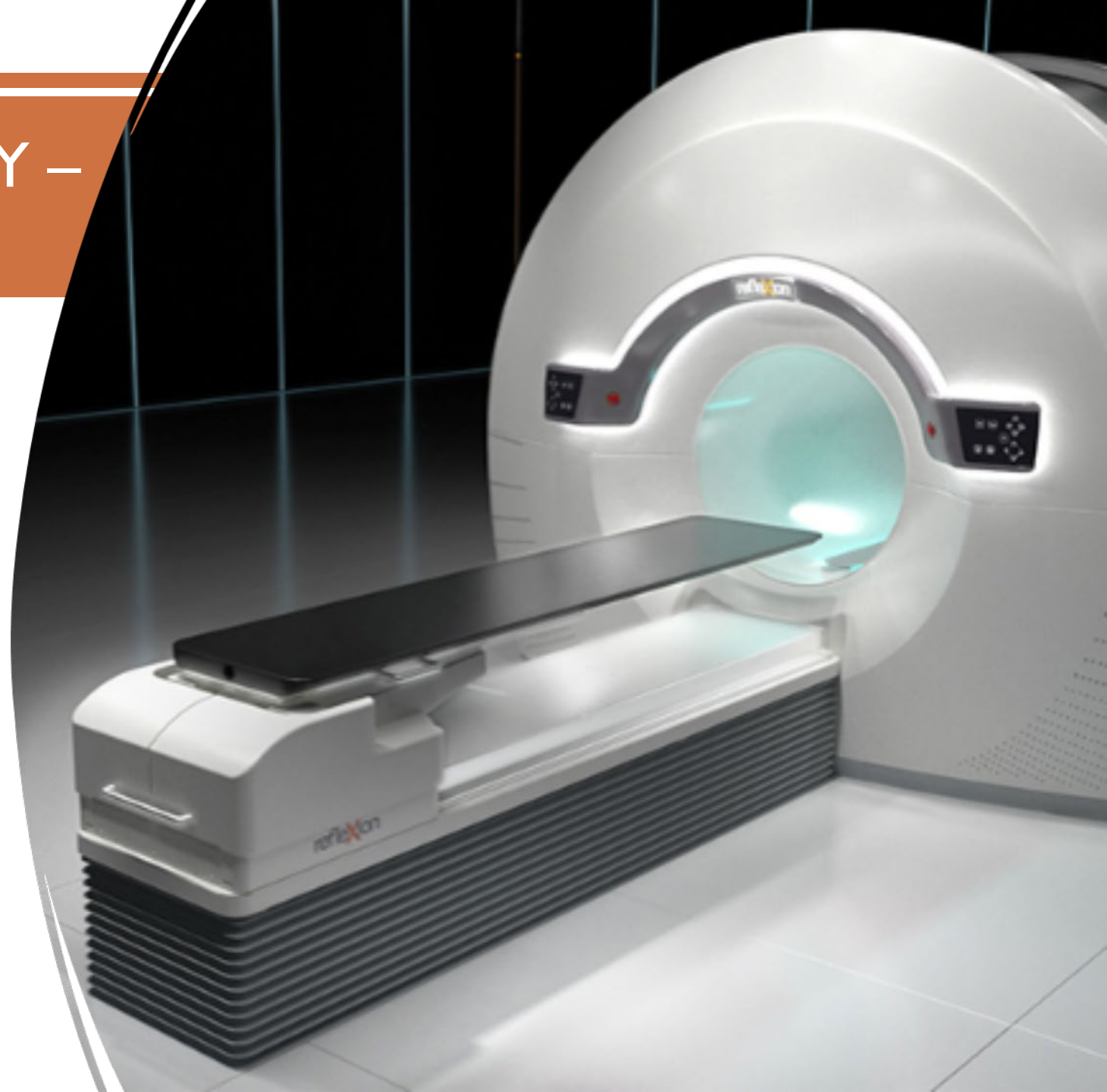
- * Review of current and emerging technology;
- * Therapy requirements relating to general, direct, personal, supervision requirements when operating a therapy X-ray machine; and
- * The use of electronic means to provide remote supervision.



EMERGING TECHNOLOGY – BRENT HERRING

BIOLOGY GUIDED RADIOTHERAPY

- Consult with Oregon Board of Medical Imaging (OBMI)
 - OBMI rule – need to be licensed in both modalities to have one operator
 - Otherwise, registrant will need 2 operators (Nuc Med and Therapy)
- Conference of Radiation Control Program Directors (CRCPD) is currently working on recommended rules to govern this dual modality operation.



PHYSICIANS TAKING RADIOGRAPHS

- Current RPS X-Ray Rule 333-106-0055:
 - Operators must have training in radiation safety
 - Operators
 - Oregon Board of Medical Imaging License (Permanent or LXMO)
 - Student
 - All other operators (Doctors)
 - Must complete Authority approved radiation use and safety course
 - Authority approved training course (topics listed in RPS rules)
 - Must have 100 hours or more of instruction in radiographic technology:
 - Anatomy physiology, patient positioning, exposure and techniques; and
 - Appropriate types of x-ray exams that the operator will be performing; and in addition
 - Receive 200 hours or more of x-ray lab instruction and practice with energized x-ray unit
 - Setting techniques
 - Practice positioning or diagnostic radiographic procedures
 - Must demonstrate competency in safe use of x-ray equipment and procedures

PHYSICIANS TAKING RADIOGRAPHS CONTINUED

- RPS does not approve medical imaging school programs.
- RPS does not have an approved x-ray curriculum.
- A possible solution?
 - RPS adopt OBMI procedures for x-ray operator approval of doctors.
 - Use as a guide and not as a means to give OBMI operator permits
- Current requests fall under OBMI LXMO permit requirements
 - Temporary (LXMO)
 - <https://www.oregon.gov/obmi/Documents/LXMO-Instruction-Manual-current.pdf>
 - <https://www.oregon.gov/obmi/lp/Pages/p-permit.aspx>

NEW DEPARTMENT OF ADMINISTRATION RULEMAKING REQUIREMENT – TODD CARPENTER

Operational Policy

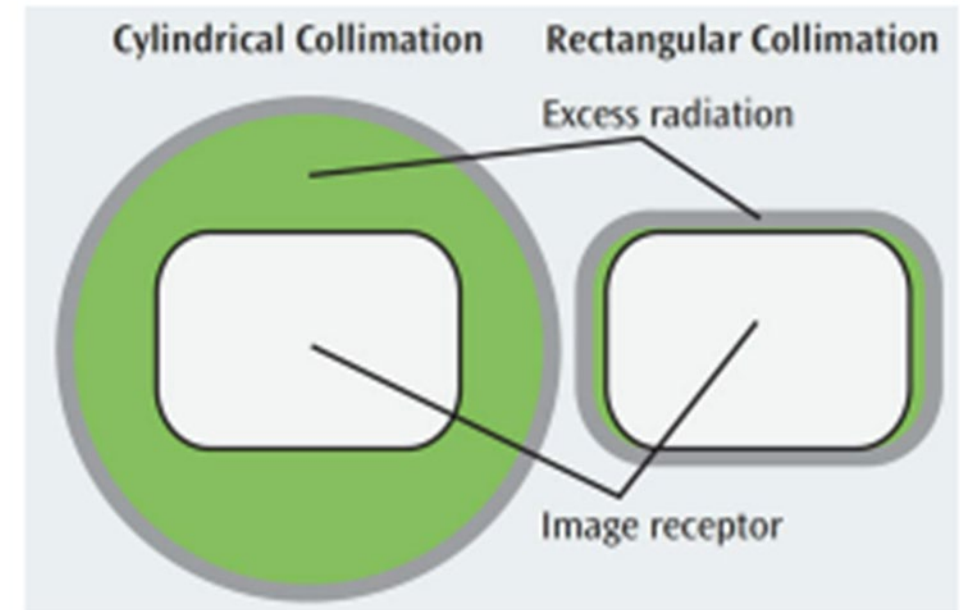
Policy title:	Rulemaking: Community Engagement, Rule Advisory Committees, and Rule Advisory Committee Exceptions		
Policy number:	ODHS OHA 010-012		
Original date:	01/01/2009 (DHS only)	Last update:	11/07/2022 (ODHSOHA)
Approved:	Don Erickson, Chief Administrative Officer ODHS Kris Kautz, Deputy Director OHA		

Purpose

Oregon administrative rules (OARs) have the effect of law. When an agency takes rulemaking action the agency is bound by the terms of the rule. The Oregon Department of Human Services (ODHS) and the Oregon Health Authority (OHA) are committed to developing rules that foster equity and reduce unintended impacts to people and communities experiencing historical and contemporary injustices and oppression through transparency and engagement. Rule Advisory Committees (RACs) and other forms of engagement with people and communities provide the agencies with the opportunity to receive input from affected communities throughout the rulemaking process.

RECTANGULAR VS. CIRCULAR COLLIMATION

- RPS recently released an information memo about circular collimators versus rectangular collimators.
- Discussed the approval of rectangular collimators
 - Less radiation around the image receptor versus circular.
 - ALARA principle
- Current use of rectangular collimators is approved under the following conditions:
 1. Due to the rectangular X-ray field being less than the circular X-ray field, a position indicating device (PID) must be used for each exam due to the high rate of X-ray cutoff from rectangular cones.
 2. Only an Oregon licensed vendor will be allowed to switch-out the cones, due to the potential of misalignment resulting in X-ray cutoff.






Informational Bulletin 2024-03

September 26, 2024

To: Dental Facility Registrants

From: David M. Howe, Program Director, 
Radiation Protection Services

Subject: Use of Rectangular Collimation Versus Circular Collimation for Dental Intraoral X-Ray Machines

The Public Health Division, Radiation Protection Services (RPS) is releasing this informational bulletin to clarify recent Oregon Administrative Rules (OARs) regarding the addition of "rectangular" collimation as an option for dental intraoral x-ray machine.

Radiation Protection Services (RPS) amended OAR 333-106-0325(2) which now includes the use of rectangular collimation as a beam limiting option for all dental intraoral x-ray machines. RPS recommends the use of rectangular collimators as a means to practice the "As Low As Reasonably Achievable" (ALARA) principle.

RPS revised the OARs due to a recent released study from the National Institutes of Health showing that rectangular collimators, if used and installed correctly, can reduce radiation exposure to patients. Rectangular collimators limit the amount of delivered radiation to little more than the image receptor. In contrast, circular collimators have a larger amount of excess radiation around an image receptor which results in more unnecessary radiation to the patient.

The use of rectangular collimation does create a greater chance of x-ray cut off from misalignment between the x-ray beam and the image receptor, since it has a lower radiation field to the image receptor. RPS intends to do rulemaking specific to using a rectangular collimator. A first of two conditions will be that the operator is required to use a positioning indicating device (PID) for each exposure. [Note: A PID is a device used to indicate the beam position and to establish a definite source to surface (skin) distance]. The second condition will be that each rectangular collimator must be installed by an Oregon approved vendor. Pending the proposed rulemaking, Registrants will need to comply with the two above conditions to use a rectangular collimator.

If you need further clarification, please feel free to contact Brent Herring, Radiation Protection Services, 503-891-0098 or email; Brent.E.Herring@oha.oregon.gov.

800 NE Oregon St., Suite 640, Portland, OR, 97232 | Voice: 971-673-0490 | Fax: 971-673-0553



LUNCH



EMERGENCY PREPAREDNESS/RESPONSE

Hillary Haskins



NAVAL REACTOR COMPARTMENT DISPOSAL SHIPMENT –
BREMERTON, WA
TOM PFAHLER & SARAH BRODESSER

GRANT FROM HEALTH SECURITY, PREPAREDNESS AND RESPONSE (HSPR)



Personal Dosimetry acquisition
(RadEye) – 2024-2025 Health
Security, Preparedness and
Response (HSPR) grant

GRANT FROM HSPR CONTINUED



Replace

Lab Floor

High Purity Germanium (HPGe) Gamma
Detector Standard

Li-ion Batteries for Portable Air Monitors

Satellite phones



Install ERT Truck Backup Cameras



Training

Radiological Operation
Support Specialist (ROSS)

HPGe Radiation Detector

Emergency Response
2025-2026 HSPR
Grant: Lab
Equipment/Training
~\$27K

EMERGENCY RESPONSE

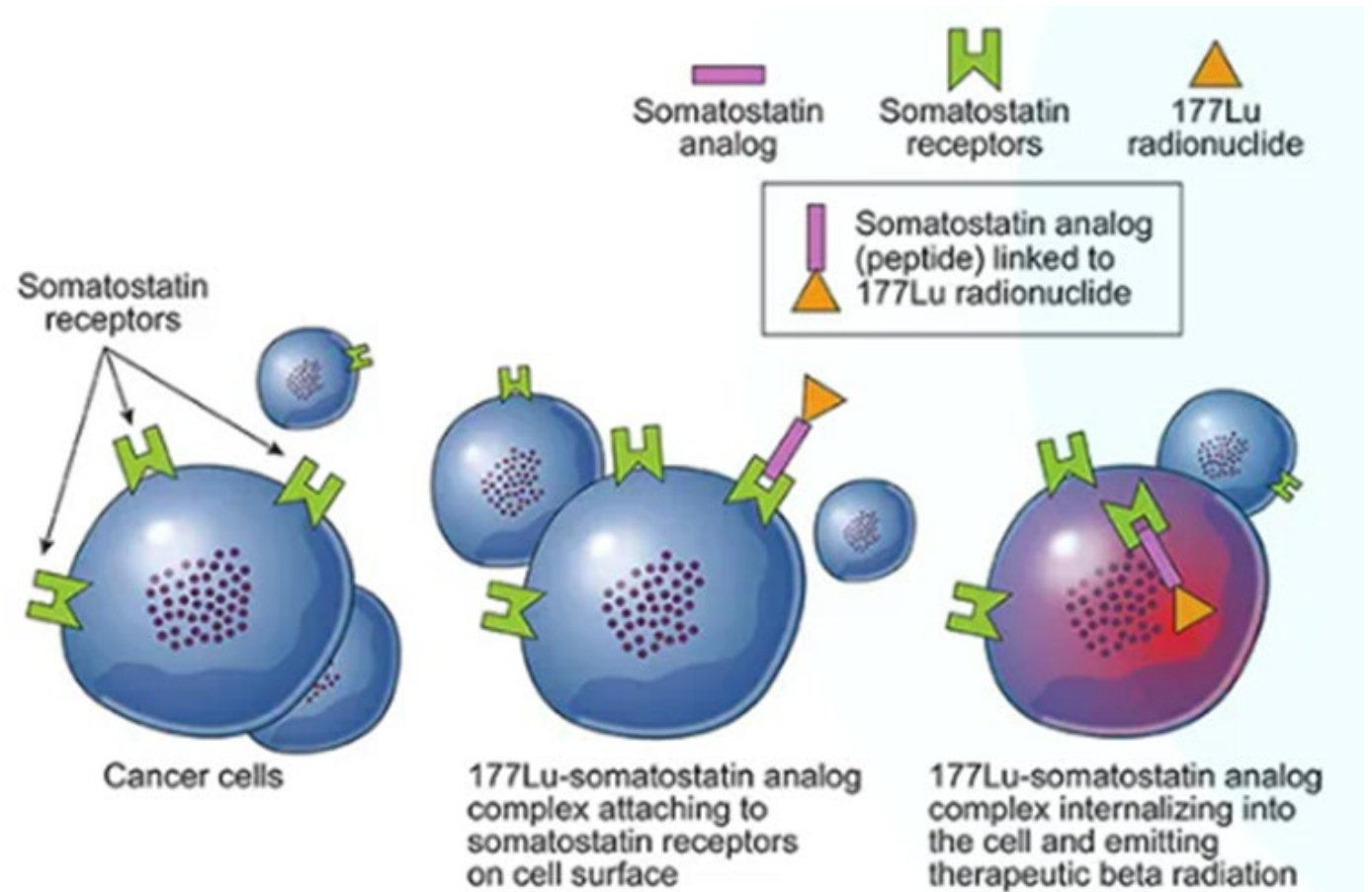
Dry Creek Landfill Event Mitigation

Lu-177 library update



LUTETIUM THERAPY

Deceased
Individual
Remains
Handling
Post Lu-177
Therapy



STATE RADIOLOGICAL EMERGENCY RESPONSE PLAN – TODD CARPENTER

This incident annex 09 should be used in conjunction with other Oregon's Emergency Operations Plan, Emergency Support Functions 1 through 18.

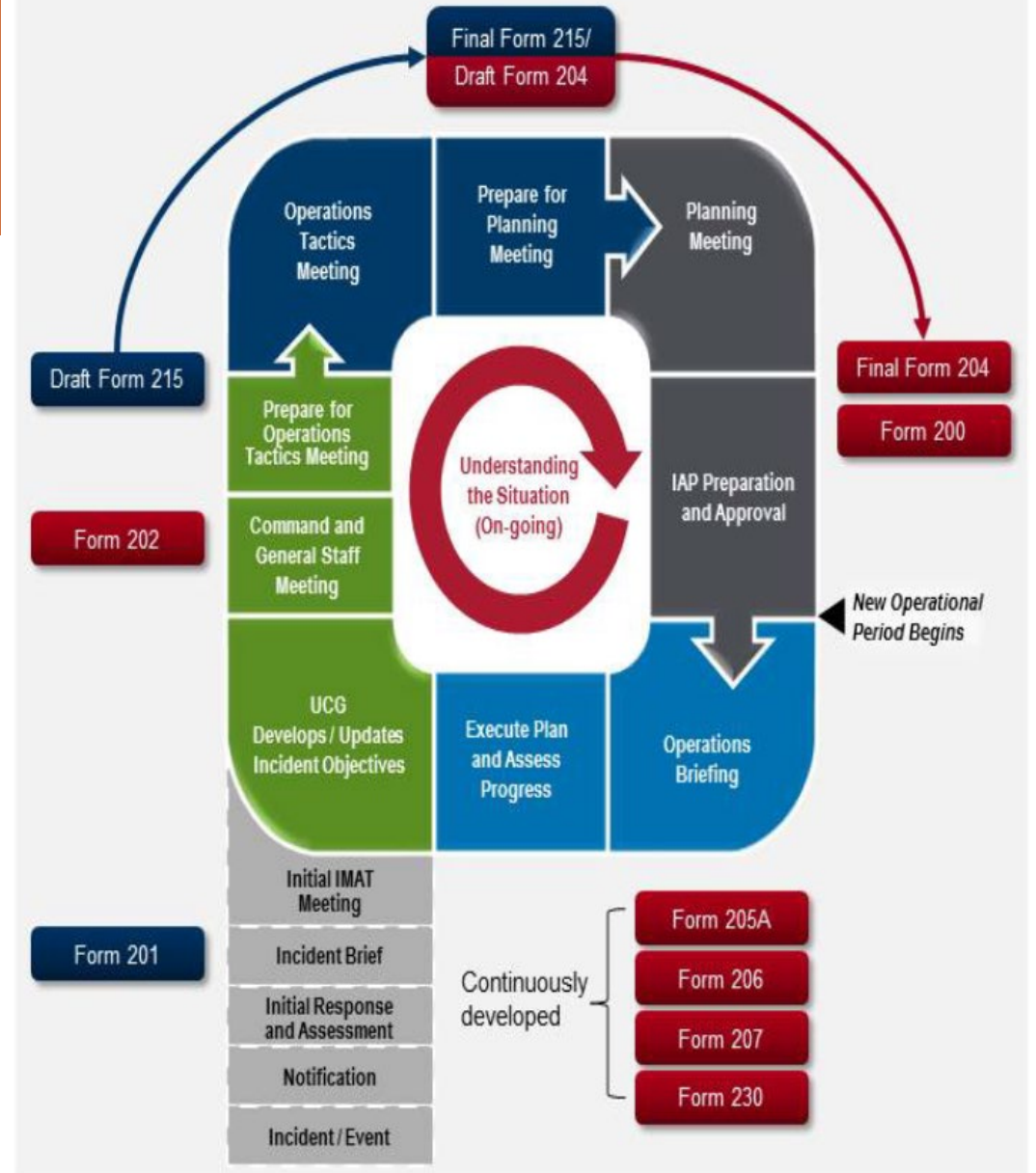


Center for Health Protection



Radiological Response Plan

To Support
State of Oregon Comprehensive Emergency Plan
Volume 3 Emergency Operations Plan, Emergency Support Function 08
Incident Annex 09



NEW BUSINESS

- Dr. Naomi Adeline-Biggs
- Started August 2024 as Public Health Director
- Polk County Public Health Director 2022-2024
- World Health Organization – Country Administrator – 2020-2021
- Seychelles (Home Country) – Medical Registrar and Physician 2012-2019
- Graduated Medical College 2012 – Obtained MPH University of Glasgow 2017



NEW BUSINESS

- Out of state travel
 - Restriction to required training or grant required training
 - Should not impact RPS training
 - Does not affect in-state onsite facility inspections



PUBLIC COMMENTS



THANK YOU FOR ATTENDING

NEXT MEETING IS FEBRUARY 12, 2025

